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Reply to Notice of Non-Compliant Amendment of May 17, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned patent application. Underlines are used to indicate newly added material and strikethroughs are used to indicate deleted text throughout:

Listing of Claims:

1. (Currently Amended) ~~A~~ An auxiliary sample handler for retaining a plurality of patient sample fluids in a clinical analyzer, said clinical analyzer including a primary sample handler having at least one patient sample container, at least one metering mechanism for aspirating and dispensing patient sample fluids from said primary sample handler and said auxiliary sample handler, and at least two analytical systems, each of said analytical systems including at least one reaction vessel having means for retaining a patient sample and at least one analytical instrument for determining a property of said patient sample, said auxiliary sample handler comprising:
sample handling means for retaining a plurality of sample fluids a plurality of first tip retaining stations for retaining a plurality of sealed metering tips; and
a plurality of second tip retaining stations for retaining a plurality of unsealed metering tips configured for use in aspirating a volume of at least one patient sample fluid from said primary sample handler,
a plurality of metering tips retained by said sample handling means,
each of said sealed metering tips having a ~~sealable~~ sealed dispense end and retaining a volume of ~~test fluid~~ patient sample obtained from said primary sample handler, each of said sealed metering tips when sealed serving as a sample container configured for use with at least one of said analytical chemistry system of a clinical analyzer systems of said clinical analyzer in lieu of the patient sample containers of said primary sample handler so as to permit asynchronous operation of said analyzer.

2. (Canceled).

3. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 1, including a sealing ~~means~~ mechanism for sealing each of said sealed metering tips.

4. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 3, wherein said sealing ~~means~~ mechanism includes a at least one heated element disposed in relation to said ~~sample handling means~~ plurality of first tip retaining stations.

5. (Canceled).

6. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 1, including ~~means for a testing system for~~ testing the sample retained within a ~~said~~ sealed metering tip.

7. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 6, wherein said testing ~~means~~ system includes a spectrophotometer.

8. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 1, wherein said ~~sample retaining means includes~~ plurality of first tip retaining stations are disposed on a first ring, said first ring having a plurality of first tip retaining stations.

9. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 8, including ~~tip supply means for retaining a plurality of unsealed metering tips, said tip supply means including~~ a second ring having a said plurality of second tip retaining stations disposed thereupon.

10. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 9, wherein said first ring and said second ring are concentric.

11. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 10, wherein each of said first and second rings are independently driven about a common axis of rotation.

12. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 11, wherein each of said rings are bidirectionally rotatable about said common axis of rotation.

13. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 8, including a cover for covering said first ring.

14. (Currently Amended) ~~A~~ An auxiliary sample handler as recited in Claim 13, wherein said cover includes at least one aspiration station aligned with said plurality of first tip retaining stations.

15. (Withdrawn) A clinical analyzer for testing patient fluids, said analyzer comprising:
a housing;
at least one chemistry system retained within said housing;
first sample handling means for handling a plurality of first patient sample containers; and
second sample handling means for retaining a plurality of second patient sample containers, each of said sample handling means being interconnected with said at least one said chemistry system.

16. (Withdrawn) The clinical analyzer of Claim 15, including first conveying means for conveying a quantity of sample from said first sample handling means to said at least one chemistry system.

17. (Withdrawn) The clinical analyzer of Claim 16, wherein said first conveying means utilizes at least one metering tip, said metering tip being sized for aspirating a quantity of sample from a first sample container through a dispense end thereof.

18. (Withdrawn) The clinical analyzer of Claim 17, wherein second sample handling means comprises said at least one metering tip having aspirated sample from said first sample container.

19. (Withdrawn) The clinical analyzer of Claim 18, including means for sealing the dispense end of each of said metering tips containing aspirated sample prior to moving a said tip to said second sample handling means.

20. (Withdrawn) The clinical analyzer of Claim 18, including means for optically testing the contents of each of said metering tips.

21. (Withdrawn) The clinical analyzer of Claim 19, wherein said optical testing means are disposed within said second sample handling means.

22. (Withdrawn) The clinical analyzer of Claim 18, wherein said second sample handling means further includes a supply of unsealed metering tips, said supply of metering tips being interconnected to said first conveying means.

23. (Withdrawn) The clinical analyzer of Claim 19, wherein each of said metering tips are disposable.

24. (Withdrawn) The clinical analyzer of Claim 18, including a dump station for the second patient sample containers following use thereof.

25. (Withdrawn) The clinical analyzer of Claim 19, wherein said second sample handling means includes at least one ring member, said at least one ring member having a plurality of stations for retaining a corresponding number of sealed metering tips, said at least one ring member being rotatably supported for movement about an axis of rotation.

26. (Withdrawn) The clinical analyzer of Claim 25, including means for rotatably driving said at least one ring member bidirectionally about said axis of rotation.

27. (Withdrawn) The clinical analyzer of Claim 25, wherein said second sample handling means includes a pair of concentric ring members, each of said ring members being rotatable about a common axis of rotation.

28. (Withdrawn) The clinical analyzer of Claim 27, wherein each of said concentric ring members are driven independently of one another.

29. (Withdrawn) The clinical analyzer of Claim 28, wherein one of said ring members includes a plurality of stations, each station being sized for supporting a sealed sample containing metering tip.

30. (Withdrawn) The clinical analyzer of Claim 29, wherein the other of said ring members includes a plurality of stations for supporting a plurality of unsealed metering tips, at least one station of said ring member being disposed along a travel path of said first conveying means to permit an unsealed metering tip to be conveyed to said first sample handling means to permit aspiration thereof.

31. (Withdrawn) The clinical analyzer of Claim 19, including second conveying means for conveying sample contained in said at least one sealed metering tip in said second sample handling means to said at least one chemistry system for testing thereof.

32. (Withdrawn) The clinical analyzer of Claim 18, wherein said first conveying means includes metering means for dispensing a portion of sample aspirated from said metering tip to a said chemistry system and then for conveying said tip to said second sample handling means.

33. (Withdrawn) The clinical analyzer of Claim 19, wherein said tip sealer includes a heated element for fusing the dispense end of a sample containing metering tip.

34. (Withdrawn) The clinical analyzer of Claim 21, wherein said second sample handling means includes at least one ring member, said at least one ring member having a plurality of stations for retaining said second sample containers, said optical testing means being disposed in relation to a predetermined position of said ring member.

35. (Withdrawn) The clinical analyzer of Claim 34, further including a mechanism to align a lifted second sample container with an optical instrument of said optical testing means.

36. (Withdrawn) The clinical analyzer of Claim 35, wherein said optical instrument is a spectrophotometer.

37. (Withdrawn) The clinical analyzer of Claim 15, wherein said second sample handling means includes a ring member having a plurality of stations, said rotor being supported for rotation about an axis of rotation, said ring member being aligned with first and second conveying means for conveying sample from said second sample containers to said at least one chemistry system.

38. (Withdrawn) The clinical analyzer of Claim 25, including at least one sensor or detecting whether station of said second sample handling means is empty prior to the placement of a sealed sample containing metering tip therein.

39. (Withdrawn) The clinical analyzer of Claim 38, wherein said at least one sensor further detects whether said sealed tip has been successfully placed in the second sample handling means by said first conveying means.

40. (Withdrawn) The clinical analyzer of Claim 30, wherein the supply of unsealed metering tips is provided in an outer ring member and said second sample handling means is provided in an inner ring member.

41. (Currently Amended) A buffer for interconnecting respective chemistry systems of a combinational clinical analyzer, said analyzer comprising having a primary patient sample supply disposed within said analyzer that retains a plurality of patient sample containers and at least two chemistry systems, each of said chemistry systems including at least one reaction vessel and at least one analytical instrument for measuring at least one property of a patient sample disposed within said at least one reaction vessel, said buffer comprising:

a buffer housing;

sealed tip retaining means for retaining a plurality of sealable metering tips, each of said tips first tip retaining stations, each of said first tip retaining stations sized to retain a sealed metering tip containing a quantity of patient sample aspirated from said primary sample supply; and

a plurality of second tip retaining stations, each of said second tip retaining stations sized to retain an unsealed metering tip used for aspirating patient sample from said primary sample supply, said buffer acting as an auxiliary sample supply in connection with at least one of said chemistry systems of said combinational clinical analyzer to permit asynchronous operation thereof.

42. (Currently Amended) The buffer of Claim 41, including a sealing means mechanism for sealing a dispense end of each of said metering tips containing aspirated sample.

43. (Currently Amended) The buffer of Claim 42, including ~~test means~~ a test mechanism for optically testing the contents of each of said ~~sealable~~ sealed metering tips.

44. (Canceled).

45. (Original) The buffer of Claim 42, including a dump station for the sealed metering tips following use thereof.

46. (Currently Amended) The buffer of Claim 41, ~~wherein said sealed tip retaining means includes at least one~~ including a first ring member, said ~~at least one~~ first ring member having ~~a said~~ plurality of first tip retaining stations ~~for retaining said plurality of sealed metering tips~~, said at least one ring member being rotatably supported for movement about an axis of rotation.

47. (Currently Amended) The buffer of Claim 46, including ~~means for rotatably driving~~ a drive mechanism for rotatably driving said first ~~at least one~~ ring member bidirectionally about said axis of rotation.

48. (Currently Amended) The buffer of Claim 46, including a pair of concentric ring members including said first ring member and a second ring member, each of said ~~rings~~ ring members being rotatable about a common axis of rotation.

49. (Original) The buffer of Claim 48, wherein each of said concentric ring members are driven independently of one another.

50. (Canceled).

51. (Currently Amended) The buffer of Claim ~~50~~ 49, wherein the ~~other of said second ring members~~ member includes a ~~plurality of stations for supporting a supply of unsealed metering tips~~ said plurality of second tip retaining stations, at least one station of said second ring member being disposed along a travel path of a first ~~conveying means~~ conveyor mechanism linking said ~~tip supply buffer~~ with said primary sample supply to permit an unsealed metering tip to be conveyed to said primary sample supply to permit aspiration of patient sample fluid.

52. (Currently Amended) The buffer of Claim 51, wherein said analyzer includes a second ~~conveying means~~ conveyor mechanism for conveying sample originally contained in said at least one sealed metering tip in said buffer to at least one of said ~~dry and wet chemistry system~~ systems for testing thereof.

53. (Currently Amended) The buffer of Claim 42, wherein said sealing ~~means~~ mechanism includes a heated element for fusing the dispense end of a sample containing metering tip.

54. (Currently Amended) The buffer of Claim 43, ~~including at least one ring member having a plurality of stations for retaining said sealed metering tips, said optical testing means being~~ wherein said testing mechanism is disposed in relation to a predetermined position of said first ring member.

55. (Currently Amended) The buffer of Claim 54, further including means for aligning a ~~second sample container~~ sealed metering tip with an optical instrument of said optical testing means.

56. (Original) The buffer of Claim 55, wherein said optical instrument is a spectrophotometer.

57. (Canceled).

58. (Currently Amended) The buffer of Claim 51 ~~50~~, including at least one sensor for ~~or~~ detecting whether a predetermined first tip retaining station of said buffer is empty prior to the placement of a sealed sample containing metering tip therein ~~by said first conveying means~~.

59. (Currently Amended) The buffer of Claim 58, wherein said at least one sensor further detects whether said tip has been successfully placed in the buffer ~~by said first conveying means~~.

60. (Currently Amended) The buffer of Claim 51, wherein a ~~the~~ supply of unsealed metering tips is provided in ~~an outer~~ the second ring member and ~~said a~~ plurality of sealed metering tips is provided in ~~an inner~~ the first ring member, each of said rings being concentric.

61. (Withdrawn) A method for coordinating the use of a clinical analyzer, said analyzer having at least one contained chemistry system, said method including the steps of:

- introducing a quantity of sample fluid into at least one metering tip;
- sealing the dispense end of said at least one metering tip; and
- utilizing said at least one sealed metering tip as a sample container for use with said at least one contained chemistry system of said analyzer.

62. (Withdrawn) A method as recited in Claim 61, wherein said introducing step includes the step of aspirating a quantity of sample fluid from a primary sample supply into said at least one metering tip.

63. (Withdrawn) A method as recited in Claim 62, wherein said primary sample supply includes a plurality of primary sample containers, said utilizing step includes the step of using said at least one metering tip as a secondary sample container.

64. (Withdrawn) A method as recited in Claim 62, including the step of dispensing a quantity of sample fluid for use in a chemistry system of said analyzer prior to said sealing step.

65. (Withdrawn) A method as recited in Claim 61, wherein said analyzer includes at least one dry chemistry system and at least one wet chemistry system.

66. (Withdrawn) A method as recited in Claim 65, wherein said at least one sealed tip is used in conjunction with the wet chemistry system of said analyzer.

67. (Withdrawn) A method as recited in Claim 61, including the step of testing the fluid contents contained within said at least one metering tip after said sealing step.

68. (Withdrawn) A method as recited in Claim 61, wherein said utilizing step includes the step of selectively aspirating a quantity of sample from said at least one sealed metering tip for use in said at least one contained chemistry system of said analyzer.

69. (Withdrawn) A method as recited in Claim 61, including the step of providing a plurality of sealed metering tips in an handling assembly, said assembly including a plurality of stations each sized for receiving a sealed metering tip.

70. (Withdrawn) A method as recited in Claim 69, including the step of conveying an unsealed metering tip to a first sample container from a tip supply prior to said aspiration step.

71. (Withdrawn) A method as recited in Claim 70, wherein said tip supply is provided on said handling assembly.

72. (Withdrawn) A method as recited in Claim 61, including the step of selectively disposing of said at least one sealed metering tip after a predetermined number of utilizing steps.

73. (Withdrawn) A method as recited in Claim 68, including the step of rotating said handling assembly in either a first direction or an opposite second direction relative to a rotational axis to move at least one sealed metering tip to an aspiration station.

74. (New) An auxiliary sample handler as recited in Claim 1, including a detection mechanism to detect when any sample tip retaining position of said handler is empty.

75. (New) An auxiliary sample handler as recited in Claim 1, including a removal mechanism to remove sealed metering tips from a said first retaining position when testing is completed.

76. (New) An auxiliary sample handler as recited in Claim 1, wherein the sealed metering tips used in the plurality of first tip retaining stations are the same sized metering tips used in the plurality of second tip retaining stations.

77. (New) An auxiliary sample handler as recited in Claim 1, wherein the sealed metering tips are configured for use as sample containers used in conjunction with at least one wet analytical system of a said analyzer.

78. (New) An auxiliary sample handler as recited in Claim 1, wherein the unsealed metering tips are further used for aspirating reaction fluids used with an analytical system of said analyzer.

79. (New) An auxiliary sample handler as recited in Claim 78, wherein the unsealed metering tips retained by said buffer are used to aspirate reagent into at least one reaction vessel of a wet analytical system of said analyzer.

80. (New) A buffer as recited in Claim 41, including a removal mechanism to remove a sealed metering tip from a said first retaining position when testing of said sample is completed.

81. (New) A buffer as recited in Claim 41, wherein the tips used in the plurality of first tip retaining stations are the same sized tips used in the plurality of second tip retaining stations.

82. (New) A buffer as recited in Claim 41, wherein the combinational clinical analyzer includes at least one dry chemistry system and at least one wet chemistry system, wherein the plurality of sealed tips provide a patient sample supply used in conjunction with the wet chemistry system wherein the primary sample supply is used in conjunction with the dry chemistry system of the analyzer to permit asynchronous operation thereof, said unsealed tips of said buffer being used in conjunction with each of said chemistry systems.